



Energy and Climate Change Committee

Oral evidence: [Investor Confidence in the UK Energy Sector](#)
HC 542

Tuesday 9 February 2016

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Members present: Angus Brendan MacNeil (Chair), Glyn Davies James Heappey, Matthew Pennycook, Dr Dan Poulter, Antoinette Sandbach

Questions 205 - 293

Witnesses: **Carol Gould**, Head of Power and Renewables, Bank of Tokyo-Mitsubishi, **Alejandro Ciruelos**, Project and Acquisition Finance - Energy, Santander, **Peter Dickson**, Glennmont Partners, and **Chris Hulatt**, Chief Financial Officer and Co-founder, Octopus Investments, gave evidence.

Q205 Chair: Could witnesses please state their names and organisations for the record? I will begin on my left.

Alejandro Ciruelos: Alejandro Ciruelos, Santander.

Carol Gould: Carol Gould, Bank of Tokyo-Mitsubishi UFJ Ltd.

Peter Dickson: Peter Dickson from Glennmont Partners.

Chris Hulatt: Chris Hulatt from Octopus Investments.

Q206 Chair: Thank you very much, panel, and thank you for your time this morning. Can I open by asking, first, how you feel the UK fares as a destination for investment in energy projects when compared with other countries? Perhaps it might be worth starting with the Iberian Peninsula.

Alejandro Ciruelos: I think it is fair to say that, over the last four or five years, the UK has fared very well, in terms of an attractive investment destination in the energy space for international and domestic investors. In the area that I cover, which is project finance, I provide debt to energy projects. The UK has attracted the largest amount of capital over the last three years, roughly around €12 billion, followed by Germany. So, so far, in terms of investor confidence in the UK, it historically has been very positive.

Q207 Chair: How is it viewed now? Has anything changed over the last period?

Alejandro Ciruelos: Clearly the recent changes in policy and focus on affordability, which in our view is not necessarily a negative, it can be a positive. When we lend we look at the potential stability of the policy and we understand that affordability is a key decision factor for Government. Certainly what would miss is, if you want the long-term visibility of additional available budget for new deployment, particularly with renewals. So, rather than saying that investor confidence has been undermined in terms of the capital interest in the UK, perhaps it has faded away a bit.

Q208 Chair: Any other additional views on that?

Carol Gould: Alejandro has been talking mainly about the renewables sector. I think we historically have also financed the thermal sector as well. Again, like Alejandro, I would concentrate on the project finance side of things and I think we have seen that being much less busy over the last five or six years and renewables being much more the focus, but from a lender's perspective, because we get involved in projects at a much later date, I think we have seen much more stability maybe than developers have seen.

Q209 Chair: The Secretary of State's reset speech; do you think that was helpful? Was that helpful towards your sector?

Carol Gould: Certainly, I suppose the big picture is helpful when talking to our credit committee because we can demonstrate that the Government is still behind the sector. Just looking at the small print and seeing where the pipeline is will be more of an issue for us I think.

Peter Dickson: Yes, for me I think I would certainly agree that there has been a positive environment for the last number of years. The fragmentation of the UK market, the unbundling of the system and the encouragement for entrepreneurial activity is better in the UK than in many countries. To put it in context, we invest purely in renewable projects but it has allowed independently financed projects to come forward with equity from sources like ourselves, and that has been very positive. The flows of equity into our sector over the past 15 years I think will probably show that, so generally speaking it has been positive.

Chris Hulatt: The events of the last few months from the standpoint of an equity investor, I think there is a case that has to some extent diminished the way in which investors view the UK. The EY survey makes that point pretty well in terms of us dropping outside of the top 10 for the first time in 12 years. Having seen our standing fall from fourth over the past couple of years, that is somewhat desponding and I think we should be aspiring to be higher up there. The UK should be an attractive location for investment to this sector. We have all sorts of benefits. We have English language, depth of the City. We have had privatisation in the sector a long time ago. We have strong rule of law and property rights and so on, so I think the UK remains a stable and attractive place, but there are going to be billions deployed into the sector in the coming years and I think it is important that the Government focuses on the direction of travel of opinion among investors. Because I think, to make sure that the risk premium remains at an appropriate level, if we keep that under control that will allow projects to be financed at a sensible rate going forwards.

Q210 Chair: Thank you. Chris, you mention there the rule of law, the depth of the City and, indeed, the English language you mentioned too. But the UK has fallen despite those

strengths. It has fallen from eighth to 11th place in the Ernst & Young—or the EY as they are now known—renewable energy country attractiveness index. What do you think has caused the UK to tumble these three places? Is it that others have leap-frogged or has the UK fallen, relatively speaking?

Peter Dickson: I don't understand what is directly behind the EY indices, so I cannot speak directly about the indices themselves but I think one of the things that has occurred over the past year is driven by sentiment. We have seen a rolling back of a number of legislative points. A lot of support has changed and, certainly since the recent Government came to power, we have seen a very large number of changes of legislation that have been followed by headlines in the press, which tend to go internationally, which have expressed a fairly negative sentiment about the support that the UK Government is giving for the sectors that attract a lot of attention, particularly in the renewable energy sector. As a consequence, the image of the sector for investment has changed quite considerably. I think that is driven very much by sentiment, not necessarily the minutiae of any of the details. A lot of the points I think we would agree with that affordability of electricity supplies to consumers is very important. That is one of the main pillars of triumvirate of policy measures. But nevertheless I think the volume of changes and some of the discussion around it has become quite negative and it has created a negative sentiment.

Q211 Chair: Will the reset speech have changed that or indeed the announcement on carbon capture and storage, which came a week or two after that, will that have changed people's view of the UK?

Peter Dickson: There is a difference between the detail of what lies behind announcements and the sentiment that it creates. Even the reset speech itself was seen in the context that there had been a considerable number of backtracking of policy measures.

I have a document. The Renewable Energy Association have produced a list of policy changes, and I think they have listed 14 separate policy changes since the election in May, and I will leave a copy of that when I go. That volume of changes does make an impact.

Chris Hulatt: To me the changes, even if relatively minor or confined to a particular area, have the potential to undermine overall investor confidence in a particular sector, and I think even things that the Government may regard not as being retrospective, to me it is in the eye of the lender or the equity investor as to how changes impact overall sentiment.

I would say one thing that Amber Rudd mentioned in her reset speech, was around making renewables pay for the cost of the impact that they have on the grid. To me this is an example of something where DECC, who are now working with Frontier Economics to study that, need to be careful to make sure that any changes that do come through, as a result of that work, are implemented carefully to ensure that existing renewable assets don't experience something that current investors would regard as being retrospective.

Q212 Chair: Peter, in your written evidence you noted that in spite of the dismal rankings of the UK it does continue to attract capital. Can we conclude that any change in the sentiment has not been significant enough to materially affect investment into the UK?

Peter Dickson: One thing that we have seen there has been a very active investment climate over the past few months, but a lot of investors have been crowding in to make

their investments in Renewables Obligation projects before the regulation changes. Now, it occurred with biomass projects a little earlier and then wind because of the gestation period of those projects before investing, but it certainly meant that there was a crowding in of capital into those markets. I think that has probably distorted what is going on.

Q213 Chair: Alejandro, you are nodding.

Alejandro Ciruelos: Yes. I would probably say that that is a fair statement, in the sense that when policy narrows down the available level support for certain technologies, and the windows of opportunity reduce over time that creates a bit of investment acceleration and a lot of attention goes into a sector. It can create that stop and go type of mentality from an investment perspective. Whereas, I think probably the most favourable outcome would be to have policies that create long-term, stable investment that accrues over time rather than being concentrated over certain periods of time in certain technologies.

Q214 Chair: Thank you. A final question from me at the moment. Do you think there has been any wider impact on investors' confidence in sectors other than the renewable sector from activity from the Department of Energy and Climate Change in the last year almost?

Alejandro Ciruelos: From a debt financing perspective, as a commercial bank, I think that the sector continues to be an attractive location. Certainly we have seen 20, 30 banks active in the UK market across the board, not necessarily on renewables, and I would not say that that has had a wide impact. I can definitely understand that for some of our clients as small developers that if you want their business model predicated very much on the available level of support in certain specific technologies, especially if they are concentrated in certain sectors that could be a different case.

Chair: Anybody else want to chip in on that? No. Thank you.

Q215 James Heappey: Good morning. Can you tell us briefly a bit more about the type of investment or lending that each of your companies is involved in within the energy sector clearly?

Alejandro Ciruelos: In terms of Santander, it is a large commercial and corporate bank. As part of our commercial activities we lend to companies themselves, but we also lend to projects. That is we provide commercial loans that make the possibility of those projects to be built feasible, similar to how we finance houses or new development in the way of a mortgage. So our main commercial activity is providing extending debt or commercial loans to renewable energy and, generally speaking, energy projects in terms of my own personal activity. We also lend to corporates that are involved in the energy sector, and there is a balance mix between both activities.

To give you some figures, for example, last year we lent across the entire UK around £0.5 billion in—

James Heappey: Million or billion?

Alejandro Ciruelos: Billion, so in excess of £500 million, and historically we have ranked in the top three in terms of renewables financiers in the UK or funders in the UK.

James Heappey: You would not have achieved that with £500,000.

Alejandro Ciruelos: No, we wouldn't have.

Carol Gould: From Bank of Tokyo-Mitsubishi, again, we are also lending to corporates and to projects, so special purpose vehicles that borrow project finance across a whole variety of sectors within the structured finance office for Europe, Middle East and Africa, which I work in. We cover the infrastructure sectors, natural resources and power and renewables. Power and renewables takes up about 25% of the overall portfolio, and the UK is about one quarter of that as well.

Q216 James Heappey: Power and renewables is separate to energy generating natural resources like coal, gas, oil?

Carol Gould: Basically I head up the power and renewables team. My boss heads up both power and renewables and the energy and natural resources team, so we work very closely together with the oil and gas team.

Peter Dickson: We are an equity provider. We are a fund manager. We raise capital from institutions globally, so we have investors in us who are Japanese pension funds. We have Middle Eastern family offices and institutions. We have European institutions and institutions from the United States, so it is global institutional finance that we then deploy as equity in individual projects. So we will buy the equity in windfarms, biomass plant, hydro stations, with the support of DECC from members like on my right.

I think it is worth noting that we raise funds on a specific mandate, and the fundraising cycle is probably about a five or six-year cycle where we identify an opportunity. We raise capital for that opportunity and then deploy it over a, say, three to five-year investment period. As a consequence, we need to understand exactly what is going to be occurring in the markets over that period of time so that we can deploy that type of variation. Once the capital is raised we cannot vary the mandate according to changes in legislation that occurs. But we take the risk in projects from the construction stage through to the operational stage and then we will eventually exit after a period of on average seven to eight years.

Chris Hulatt: Octopus is a financial company with about £5.5 billion total funds under management, of which about one-third is in the renewables sector. We invest primarily in large-scale solar but also in onshore wind, some AD and some reserve power. We are primarily an equity investor and—much like Peter explained—we are also an active investor in shuffle-ready sites and we look to hold those assets for the long term.

Q217 James Heappey: Thinking about the project pipeline from development to construction to operation, and respecting your nervousness over commercial sensitivities, but what sorts of things would your companies invest in and what would the things that they definitely would not invest in? If we can have your thoughts on some of the things that, given the current state of play with UK Government policy, you still feel very much you could invest in, some of the things that you now feel you couldn't.

Peter Dickson: May I just start with three thoughts? I can only talk about the mandate of the fund that we have now. We can raise a fund and as long as there is traction for that fund we can raise a fund to invest in almost anything in the energy sector, but what we currently have funds to invest in is projects that are fully consented. That means that all

the consents are ready—it is absolutely ready for construction—and we can invest in those projects all the way through to sometime during operations. We are mandated purely for renewables and in our case that means onshore wind, ground mounted photovoltaics and biomass using combustion technologies.

We have to invest inside the eurozone with the exception of a considerable sleeve that is allowed for European non-euro currencies, which we have invested entirely in sterling in the UK, so therefore we are a very considerable investor in the UK market. We don't take development risk in projects and we don't particularly take disproportionate technology risk, so the technologies that we do invest in have to be proven. In our case that means that they have to come from reputable EPC providers who can provide guarantees behind it and that there are numerous commercial examples already in operation.

Chris Hulatt: We are terminal diagnostic but what is important to me is that we retain an environment where developers feel confident that they can take projects forward, knowing that they will get to a point further down the line where there are investors who are willing to then put forward the finance for the construction phase. One of the concerns that we have is that there is going to be a very diminished pipeline going forward. We would like to see clarity on what the medium-term plan is from the Government around onshore wind and solar, particularly given the low cost route that can fire towards decarbonisation.

I think one of the challenges around the supply chain, from a developer's standpoint, is the time period that it takes for them to prepare projects through to the point at which construction finance can be applied. I think it is also very difficult for technologies to essentially be turned on and off, so the supply chain for areas like onshore wind and solar is at risk of falling apart and being frittered away if there is a stop/start approach to the availability of—

Q218 James Heappey: Have you seen any evidence of this so far?

Chris Hulatt: I am concerned that this will happen; particularly in the solar sector where there is a rush to deploy money at the moment.

James Heappey: Have you seen any evidence of it happening so far?

Chris Hulatt: We are certainly aware, anecdotally, that some of the developers are turning down their activity levels, and I am sure you have heard evidence from solar developers in previous sessions who will have talked about the impact that the Government measures have on their own particular businesses.

Q219 James Heappey: We have but the issue is that it is all anecdotal. It is all sort of, "Well, I have heard that X is happening". What we are waiting for is somebody to say, "Last week we tried to commission a project but we couldn't do it because the supply chain had disappeared here".

Chris Hulatt: We are a fund manager, so our desire is for developers to bring forward development ready sites. In the current landscape I think the concern of a fund manager, like Octopus, would be: where are those sites going to come from in the future? Is there going to be a landscape that allows those sites to be viable? So the way in which onshore wind and solar are going to be shut out of CfD, what is the funding mechanism going to

be? Is there a desire on the part of the Government to have onshore wind and solar as part of the long-term mix or is this going to be sectors that are not particularly part of that?

Q220 James Heappey: Is there anybody who would like to add to that, otherwise we will move on?

Carol Gould: From the technology side, we are most active in offshore wind and onshore wind but we will look at other technologies as well. I think it is more the revenue stream and looking at how that subsidy works from a revenue perspective is the most interesting element for us.

Q221 James Heappey: We have heard suggestions that, while current activity is quite high based on the existing pipeline of projects, there has been a lull in the types of activity projects seeking finance, so entering the pipeline all together. Is that something that you would bear out?

Carol Gould: Yes.

Q222 James Heappey: Nods of agreement. Are there any particular examples you care to share?

Carol Gould: I suppose at the moment we are actively working on a number of offshore and onshore wind projects, but there is a much smaller pipeline of earlier development projects. Normally we would get involved maybe six months before financial close or maybe a bit earlier than that. At the moment we are generally two to three months before we are signing a facility agreement and there are not so many projects, apart from those that are hoping to bid for a CfD in the future. There is a bit of a gap between those that we might have been financing at the end of 2016, early 2017. We now have a number at end of the next, I suppose, two quarters and then we have a big gap until the CfD projects from the next auction come through.

Q223 James Heappey: The Government has given a number of signals about where it is going. That very early end of the pipeline you have seen offshore wind has continued to come forward. Onshore wind and solar fading away. You are seeing that already?

Carol Gould: Yes. Certainly, from the pipeline perspective, there are fewer discussions with developers regarding new projects.

Q224 James Heappey: Are you able to quantify that, just roughly? You are now having half as many conversations with onshore wind people?

Carol Gould: It is probably closer to 95% less conversations with onshore wind.

James Heappey: Really?

Carol Gould: There are just a very limited number of people. The people we are talking to are people who are looking at maybe onshore wind on Scottish islands or—

James Heappey: They love it out there.

Carol Gould: —in sort of areas where maybe there is a potential for some subsidy.

Chris Hulatt: I think the offshore wind sector is looking to see what DECC is going to do in terms of the market stabilising CfD, and whether that comes forward as a viable mechanism to provide support.

Q225 James Heappey: Is it a similar drop off for solar right at the front end of that project pipeline?

Carol Gould: We have been a lot less active in the solar sector.

Q226 James Heappey: Again, it would be really useful, that 95% figure I sense will have already jumped into the minds of the report writers.

Carol Gould: As I say, we have not been very active in the UK solar sector, which is less to do with Government policy and more to do with time resources and opportunities that came across our desks.

Alejandro Ciruelos: I would say that definitely we have been—I will not be able to quantify it exactly—in a lot less discussions around new greenfield developments. Although there is still a bit of trading activity on the back of those projects that qualified for a grace period back in July, and where we are seeing a lot of activity in the solar space are those projects that went through construction over the last, I would say, 12 to 18 months going through a refinancing process and capital being raised either in the form of institutional money, equity or debt as well as commercial banking loans.

Q227 James Heappey: If it is not commercially sensitive, it would be fascinating, from the two banks to get—we are six weeks or so, eight weeks beyond the reset speech—some sort of empirical evidence of the reduction in people seeking investment for solar projects since that policy announcement. As I said earlier on to Chris, the great difficulty we are having in nailing down the impacts of Government policy on the solar sector, in particular, is that everything we get is vague and anecdotal. It is, “He said that she said that this happened”. It would be hugely useful to get hard evidence that the impact of that policy decision has meant this on projects in the pipeline, people seeking investment.

Alejandro Ciruelos: I think for something to go with your anecdotal unfortunately there is going to have to be a lack of time because projects take time to go through, grade processes, investment decisions as well as construction, so I think probably you will see the result of Government policy within a few months. I would say it is a bit premature now to say what the impact is.

Q228 Matthew Pennycook: I want to ask specifically on onshore wind. I just had the pleasure of sitting through line by line of the Energy Bill in the Public Bill Committee. One of the areas of debate there was how clear the Government’s manifesto was in terms of the early closure of the Renewables Obligation. I want to ask you, as investors, the Minister said repeatedly during the public committee that the Government’s manifesto, which if I can remember the wording said, “We will end new public subsidy for onshore wind”. Were investors aware and, if so, how did you react to that meant the early closure of the RO.

Alejandro Ciruelos: We are not exactly certain what it meant. It was clear that the focus was going to go in a different direction other than onshore wind and, therefore, I think the realisation of the implications of what the manifesto meant only came through with the

July publication of the consultation. But it was clear that there was going to be some form of reshape of what is going to happen to onshore wind support.

Carol Gould: I think we had anticipated definitely no new CfDs for onshore wind but probably not the early closure of the Renewables Obligation.

Chris Hulatt: I think it was also a challenge, following the introduction of the initial rules, waiting until there was clarity on exactly how the change is going to be implemented, and making it difficult to secure financing packages when in discussion with banks, for example, over the course of the summer and the autumn, where there was a desire to understand the minutiae of how the rules were going to be executed before it is possible to close the financing on certain wind transactions.

Q229 James Heappey: Chris and Peter, when you are raising money from institutional investors, what are the questions that come out most commonly when they are wanting to understand the UK energy market and, perhaps more usefully, have you seen any change in the questions that they are asking of you on the back of Government announcements on energy policy since May?

Peter Dickson: The questions tend to be they would like to understand them. Up until recently there were long discussions about how the Renewables Obligation worked and how certificates were traded, what the value of those certificates were. The tone of the questions was about what is the security that you have around the pricing risk and how much you are exposed to the pricing market. We would spend a long time—

Q230 James Heappey: Which are pretty standard; you could be talking about any investment?

Peter Dickson: Exactly, but that was the style of those investments. We would talk about different technologies and we are very exposed to biomass in the UK, so we would talk about those sorts of things. In recent years the headlines—and I talk about headlines because it is a sentiment issue—started to express concern that the UK Government is no longer backing the long-term support, the reduction of subsidies. So the questioning has become very much more politically oriented around the longevity of support: do we see that there is going to be any changes? Will there be retroactive changes? There is a concern that investments that have been made would be retroactively impacted by changes that occur in the future, and we spend now a very considerable amount of time around that. I will say that the reputation of the British governance is much better than it is in other countries, so people tend to have a much higher degree of confidence in an investment in the UK and the belief that the UK Government is not likely to make retroactive changes to legislation. But for now, for the first time since we started raising funds quite some time ago, we started getting questions directly around that and on specific instances: if it has occurred, if it is likely to occur. What does it mean that we are seeing the changes? What do the individual announcements on individual policy measures actually mean on a larger scale? So that has become a considerably larger part of the discussions that we have with institutions.

Chris Hulatt: It is also around the direction of travel. I think investors want to see clear and consistent policies that apply with some continuity. I think we should put some perspective, I guess, in terms of the EY index, so countries where there have been

retroactive changes even if it was some time ago, like Italy and Spain are still very lowly ranked in that EY survey. There are 40 countries in that survey, so our 11th place ranking is still just outside the top quartile. But I think it is also something that many investors around the world struggle to understand the role in the UK of the Government in setting energy policy. Other countries have far more of a technocratic approach to it, something that in this country clearly we have far less of. I think that is part of the challenge to anyone trying to educate and inform overseas investors about the UK landscape.

Q231 James Heappey: Two observations on what you have both just said. The first is that once you have made retrospective change that is a fatal blow to investor confidence, because that lives long in the memory and people then just do not trust you going forward. Secondly, many investors will have been in it for decades and they will be pretty smart. They will understand that in the period after an election there is a period of policy uncertainty. Presumably those who are looking to invest in the United States in the early part of next year are looking very nervously at what is going on there. So to what degree is this just a routine part of the political cycle that all of your investors, wherever they are investing, go through in every election cycle, and to what degree is this unique because the UK has done something different in the way that it changes policy and course after an election?

Peter Dickson: I think what is different is that there wasn't a silence after the general election. There was background noise that was, generally speaking, not too positive, whether it was talk about green crap or the manifesto, their commitments to early closure of the support for onshore wind or—

Q232 James Heappey: But in a year's time what on earth do you think the United States energy policy is going to be? It seems to me that watching an election that is very well covered over here—we see few other elections elsewhere in the world quite as well—I am not sure I see any clear statement of energy policy. They won't even know whose policy it is that is going to be on the ticket until we get to August. So I wonder the degree to which this is the natural variation that comes with a democratic cycle.

Peter Dickson: We wouldn't have been sure either of the general election in this country until that night in May. I think it was also just as uncertain. But nevertheless, once the election occurred, we actually did know. We knew the manifesto commitments. We had heard the announcements that came from the Conservative side, so that there was already a feeling that the Conservatives had a feeling of antipathy to renewable energy and we can only speak on renewable energy.

Q233 Dr Poulter: On that issue of the political cycle, certainly at the time of the Climate Change Act and the legislation that was put together by the previous Labour Government and, indeed, during the early years of the coalition Government, there appeared to be a general consensus across the political spectrum in this country on where energy policy was heading and the approach towards incentives in the system. Clearly there was a direction with wind that was signalled and flagged up in the Conservative manifesto, but I wonder whether investors were basing their decisions on what was a fairly accepted political consensus in this country about the direction of energy policy.

Alejandro Ciruelos: I think the UK in a sense is a victim of its own success because clearly previous Governments, as well as the present one, by implementing EMR I think it is a policy framework that works very well. Certainly we are in the process of going

through our first investment decisions to price the benefit from a CfD, and clearly we had expected a lot more activity based on what I think is a sound policy. What I think has changed beyond the colour of the Government is the rate of deployment that has occurred over the last two years, which I think in certain cases particularly in solar, RO and FIT supported product has been beyond expectations. In the context of putting that in combination with the Levy Control Framework cap it has a trigger action. We can question: what are the consequences of exceeding that budget? But, certainly, all of these changes are triggered by if you want that level of deployment.

Q234 Chair: So the UK has gone from being a victim of its own success to maybe being just a victim full stop?

Alejandro Ciruelos: I would say the UK has done very well and I think it is fair to say that in the context of affordability and deployment in renewables, I think it is right to question the right balance. In terms of how that is put forward in terms of policy changes, the concentration in a certain time span and so on that is the thing that can be debated.

Q235 Glyn Davies: Just one brief point. It is sort of a repetition. We are looking at this area where a Government's policies might have been unexpected and had an impact on investor confidence. Now, if you looked at the period before the election, there was a lot of debate about the Levy Control Framework and the cap being reached. There was also a lot of talk in Conservative Party circles who might have formed the Government. In the event it actually did. But there was a very negative attitude toward onshore wind. Surely investors, all of them would have been taking those factors into account. So when the changes came in after the election wouldn't it have fitted in with a lot of what you might have anticipated could happen?

Chris Hulatt: It is such a long-term sector the energy sector. It clearly stretches beyond electoral cycles, and I think what investors are looking for is: what is the long-term route that the UK is going to take in terms of decarbonisation and how are we going to deal with the trilemma? What does that mean for choices around different technologies? I think, much as we focus at the moment on measures that have been changed fairly and the outlook for the next few years, I think the industry is also looking forward to understanding: what is going to happen beyond 2020? What is going to happen to the LCF? How are we going to create the right kind of blend of different types of energy infrastructure in our overall environment? What is the role of demand side response going to be? How is storage going to play a role in that mix? These are all the kind of questions that we as investors ponder. It is also the kind of questions that we get asked when we meet potential investors in the funds we run.

Q236 Dr Poulter: Just quickly on what I said earlier and picking up on what you just said. As you said there was a general consensus around the time on the decarbonisation agenda with the Climate Change Act across the political spectrum that this was a good thing to do. That sent out a long-term agenda about where the political direction of travel was across the political spectrum. I am wondering how investors respond to that and whether you think there has been any change in that consensus and signals that are being sent out to investors more recently.

Chris Hulatt: I think investors thrive on policies that they think are going to be consistently applied over the long-term. One of the problems with what might seem to the

Government to be relatively minor changes is the way in which they are extrapolated by investors sitting in Tokyo or the UK in terms of what is the direction of travel and what that might mean. Investors are looking at a defined stable and secure place to deploy their money. They have choices around the geographies that they choose to back. They are also looking to find environments where they believe they can get projects that can be delivered on time, without potential disruption and that meet their hurdle requirements. To me what we need is that long-term framework that extends for many years, which gives visibility and confidence to developers but, in turn, facilitates investment into construction staged projects and so on.

Q237 Chair: Thank you. Moving on a bit, do you think any of the policy announcements made since the election in May last year could be described as retrospective?

Chris Hulatt: The removal of the LECs has impacted cash flows that investors expected to get, so to my mind that is something that investors would regard as retrospective.

Q238 Chair: Anybody else have any feelings on retrospective?

Carol Gould: We have had to explain internally about the LEC removal, and maybe we are fortunate in that we have been involved since 2002 when the term of the LEC was a little less certain than it might have felt by the time we got to 2010, 2011 or whatever. So we have always seen it as a tax and have been I suppose a little surprised when it disappeared. But being debt rather than equity it has not affected our debt service and it is the equity that has suffered from that and, therefore, the internal explanations have been that it was always a tax and that it was always less certain than the RO and we have spent a lot of time explaining why it is so different to the Renewables Obligation.

Q239 Chair: There has been a feeling: some have said it has been retrospective. Some have said it hasn't and it is arguable about the retrospection but the feeling here is—

Carol Gould: It was more of a surprise. It was always something that could disappear but it was probably unexpected that it went overnight.

Q240 Chair: Yes. That rate of change unnerved people, do you think, or am I being unfair there?

Carol Gould: Yes. We have certainly had to explain internally as to why it happened and how it happened so that Tokyo can be comfortable that the RO is not about to go the same way next week. I think “unnerving” is probably the word to use, yes.

Alejandro Ciruelos: I think historically on LECs particularly, when we were doing projections and forecasts of different revenue streams for renewable projects, it was something that had, like, historically a four or five-year visibility at the most so at some point it could go away. I will agree with Carol that perhaps in terms of how it happened the process itself was a bit sudden.

Peter Dickson: Just a quick one. I know that many years ago, maybe 15 years ago, we were looking at projects and we would always put a finite life on the LEC, and so we always expected that it would only have an overhang of so many years after the investment because one day it would disappear. The fact that it disappeared so suddenly, I

think created a disproportionate amount of attention on what occurred. I think had it been trialled for a period of time it would not have had nearly as much of an impact as it had when it disappeared so quickly.

Chris Hulatt: It is definitely something that should feature in people's scenario modelling. My recollection is the main industry consultancy assumed that they would be in place until about 2022, something like that, so clearly a change compared to what people had in their base case models.

Q241 Chair: Thank you. Just a final point before we move over to Matthew Pennycook. When we had DONG Energy here—they indicated almost like the 95% you mentioned there, Carol, which is quite a strong indicator in fact—they said there had been a lot of phone calls between their office in the UK and their head office in Denmark. Did any of you experience similar international phone calls as people were trying to figure out what the UK Government were doing at that stage? I am asking that as a sign of feelings within organisations, trying to guess feelings within organisations.

Carol Gould: Certainly from Tokyo: it was seen by our credit team in London who reported it to Tokyo, and memos were written to explain what the situation was and how it impacted our portfolio.

Q242 Chair: Did Tokyo accept or were Tokyo nervous?

Carol Gould: The most important thing was the difference between the RO and the LEC, and they accepted that there was a difference and the impact on our portfolio, because we are debt and not equity, was not too significant.

Q243 Chair: Anybody else want to jump in on it? Peter?

Peter Dickson: We had constant conversations with our LPs, and our limited partners are global groups, so in those conversations, which are always ongoing, there was quite a focus on UK changes: has it impacted on the projects that we have, the exposure that we have to the UK market? So it certainly was part of our conversations.

Chris Hulatt: Clearly the impact of retrospective changes, like the LEC, falls into the hands of the equity investors, so I think it is quite an important distinction between the views of us as an equity investor compared to banks that still have plenty of cushion over and above their position.

Alejandro Ciruelos: I think the focus for us rather than LECs because, as Carol mentioned, that probably has more of an impact on equity returns rather than our activity in the commercial lending side, was the early closure of the RO and, in terms of the projects we were considering lending to at that point in time, whether they would be affected or not. Clearly there was a period where we had to consider carefully everything on a project by project basis until we had further clarity about what the outcome of the consultation process was going to look like.

Q244 Matthew Pennycook: I want to turn our attention to the Levy Control Framework if possible. We could no doubt have a long discussion about what the original intentions were. I understood it was a mechanism to change our energy mix and to reduce the costs of doing that. It has been interpreted—I think, perhaps in a way that it wasn't intended—as a very

fixed, hard budget framework, but it would be good to get an idea from you how concerns over the Levy Control Framework moving into the headroom affects your investment decisions.

Alejandro Ciruelos: So far for us it has been a helpful policy tool in terms of understanding that the Government retains an element of control, or what the total spend is in low carbon technologies. I think obviously because of—what I mentioned before—the rate of deployment in certain technologies, particularly under RO and FIT, has been more accelerated than expected. Perhaps the question is now: what is going to happen beyond 2020 and whether the existing headroom, which it seems has been utilised, will be increased? I think it affects primarily what is our view about the potential of new deployment in the sector, and, in terms of the commercial activity of our own clients, what has been mentioned before, obviously it takes a number of years to put a project together. So, for wind developers, solar developers, particularly the technologies that don't seem to be in the direction of travel of Government policy, then it has definitely affected their ability to invest and to stand by the sector. I think going forward is whether that 7.2 billion cap will be increased or upsized and then what is going to happen beyond 2020, 2021 I think is the most important policy for us. For example, Brussels, the EU, is already considering a target towards 2030 around 27% of renewables total energy consumption. That is across heat, transport, electricity and power generation. That is trying to set the right trajectory for new investment coming into the sector and for investor confidence to be put back on track, yes.

Carol Gould: From our perspective I suppose it is more of a helpful tool to understand the pipeline going forward. I think by the time we have a CfD for a project that we are lending to—and we won't lend to a project until it has got its CfD—it is more academic for a lender as we are not putting millions into developing a project to the point of actually getting the CfD, so it is more of a pipeline issue I think for us.

Peter Dickson: I would say the same as Alejandro that understanding what is going to occur after 2020 is the most significant thing now. As I talked about our funding cycles and how we raise capital for future projects, we now need to have a view five or six years into the future to understand where the pipeline is going to be, where the projects are going to come from and at present that is a bit of a blockage in our vision for the future.

The funding mechanism itself I think we do not have a particular problem with. It can work fairly well, but some of the underlying assumptions that are there to understand the availability of capital are something we don't fully understand. Nevertheless, I think post 2020 is a major concern.

Chris Hulatt: Yes, I echo what has been said about the need for the post 2020 period to be clarified. With the current LCF I think there is work that could be done to try to understand: are the assumptions underpinning the forecast overspend correct? That is an area where there could be more collaborative work between the industry and DECC to try to get to the heart of that.

Q245 Matthew Pennycook: In terms of assumptions, can I pick up on something Mr Ciruelos said in terms of over deployment? We have heard evidence in the Committee that we are not on course for our EU renewables targets for 2020 in terms of heat and transport. In that scenario renewable electricity generation might have to make up the—is it over

deployment in that sense, or do you assume that an over deployment is a good thing and may need to be factored in?

Alejandro Ciruelos: It is fair to say that renewables penetration in heat and transport is a difficult thing as a whole. I was in Brussels last Friday discussing with the EU, and generally speaking they are more complicated sectors. Generally speaking, biofuels are exposed to the commodity cycle anyway, so in terms of like stable investment it is a difficult thing. Then in terms of heat it is the granularity of the supply chain and the granularity of the projects makes it difficult. So, generally speaking, I would say not particularly the UK but the EU as a whole I think most likely there will have to be some over deployment in electricity to compensate perhaps the under accomplishment on heat and transport.

What is the right mix and the right balance? I think it is for EU policymakers to choose and to make a decision on, and I think the capital is to be made available to these projects but what is the right mix is on the other side.

Q246 Matthew Pennycook: Mr Hulatt, you have talked about the assumptions underlying it. Can I turn now to what you think those assumptions are? We would all agree that the LCF is not particularly transparent, perhaps not as transparent as we might want it to be? Could you go into what you believe to be the assumptions behind that at the moment and then, moving forward, what in an ideal world to aid your investment decisions would you like to see published? What is missing from how the Government reports on the LCF, what it publishes, what it makes clear as to what the thinking behind it is?

Chris Hulatt: Certainly to us it is about clarity and real understanding as to what are the factors. I recognise there are a number of factors that supposedly are behind the overspend at the moment: the shifting down of the wholesale price, the FIT situation, increased load factors for onshore wind, those sorts of things. But looking forward I think what we really want is a framework that gives consistency and clarity to people, which takes into account all of the long-term factors. What is the approach going to be towards onshore wind and solar? Are we going to have market stabilising CfDs that can make those sectors viable?

To echo the point that Alejandro made earlier, we spend a lot of time talking about the supply side, I think the demand for electricity is also something that is worthy of more consideration. There are a wide range of different scenarios published by various stakeholders, around where demand is going to get to. These vary very significantly. There are all sorts of different assumptions in and around the take up of electric vehicles, for example. This is a topic that many Government departments are getting involved with now. I think it is critical that there is some cohesive thinking around how that is going to work and what that impact is going to have on long-term electricity demand, and that is factored into all of the support mechanisms that are going to allow the actual generating infrastructure to be put in place.

Alejandro Ciruelos: I think it should be more of a breakdown by technology, load factor assumptions, power price assumptions, all of that will be very helpful in understanding how the cap overspend/underspend is. That would be a helpful development for sure.

Q247 Matthew Pennycook: A final question: we have heard it before and you have echoed some of the calls to perhaps give investors and the commercial community more of an idea of

what the LCF beyond 2020-21 would be. What level of detail do you think it would be reasonable for Government to provide in that regard should it be so minded to? Are we talking an annual breakdown or is it something more general that gives the direction of travel?

Peter Dickson: Generally speaking, just an overall target that is seen as a significant commitment would be positive. The detail that can follow from behind that is not necessarily there, but at the minute the concern that we have is that there is no specific target that goes beyond 2020. We need to have something that is there. How that can follow on probably does not need quite so much detail. That overall commitment that we know that we are going to be working towards is important.

Alejandro Ciruelos: I was thinking the length of visibility is certainly not a couple of years. I think we are talking about somewhere in between 5 to 10 years beyond 2020. That is what gives the sector visibility in terms of getting geared up towards new development.

Chris Hulatt: I would like to see it done on a roll-forward basis so there is a consistent medium-term vision that every year is updated, so that the industry knows where DECC, Treasury, any other stakeholders, National Infrastructure Commission, whoever, all buy into. If that is updated regularly then I think that really helps give that confidence to the sector.

Q248 Chair: Thank you, Mathew Pennycook. Before we move on to Dan Poulter, just a point on the LCF. Do you think it is underplayed, or not appreciated, the affect that the LCF in the past has had on the current wholesale energy prices? If there was not X, Y, Z renewables built in the past, which have come in under the system, which then, because at the point of generation they are very cheap, once the capital costs are done—is there an appreciation of the affect these have had on the wholesale price that the consumer is then benefiting from, perhaps?

Carol Gould: I think that is probably me. There are natural resource prices as well that come into that equation.

Chair: Yes, they have pushed that down as well. Yes.

Carol Gould: Yes. I think it is that combination of more renewables coming on to the system, and the gas price going down, and coal prices coming down.

Q249 Chair: Yes. I suppose, as you said, the fall in the fossil fuel prices has pushed the wholesale price down. But do you think there is an appreciation of the previous work the LCF has done to current wholesale prices? Is there an appreciation of that generally?

Carol Gould: I am not sure that there is, to be honest.

Chair: Thank you. Does anybody else have a final view on that? No. Okay. Dr Poulton.

Q250 Dr Poulter: A number of the witnesses we have had have asked for a long-term vision from the Government, and it is something we touched on today, investor confidence. What do you think the Government should be doing to give that long-term vision and to allow investors to have long-term confidence in what they may or may not be investing in? Is it

about targets, or is it about other things, and what would your suggestions be that would help investor confidence?

Peter Dickson: I think the simplest thing is targets. It may or may not be the right thing, but it does create a very strong sentiment, a very warm sentiment, in the market. The targets that we saw in the past, and I do not think we should underplay them, have created a very high level of confidence in the investment sector in the market and have created that in the industry. Those targets themselves have pushed down the price of technology significantly, whether it is the solar industry or it is the wind industry. The simple measure of a target does give manufacturers, installers, developers and investors a high degree of confidence, which itself then has an ongoing impact in reducing the cost of the components that go into the generation.

Q251 James Heappey: Just to add into this question: are there countries that you would hold up as good examples of where you can say, regardless of what might come in forthcoming elections, you know the direction of travel of that country and it is not going to change?

Peter Dickson: I have thought about this in the written evidence.

James Heappey: If not, is what you hope for from the UK unachievable, given that you do not get it anywhere else?

Peter Dickson: I do not think there is any country that one can say is the beacon that we should follow, because every country has its positive and its negative sides. There is no doubt about that. What we are trying to do is just look at where there are particular areas that need some attention in the UK and try to advise on that. I would not go as far as to say that we should follow the rules of any other country.

Q252 Chair: I think the question is: which countries are better for long-term clarity and which countries are the worst for long-term clarity, if I can paraphrase?

Alejandro Ciruelos: The EU, at an EU-wide level, is certainly trying to put the right targets in place and give that long-term visibility. But then it will be down to each individual country within the EU to put in the adequate policy instruments to achieve those targets. I think in this country it is a bit the other way around, in the sense that I think the policy instruments in terms of things like the CfD for power integration and so on is there, and I think it is an effective policy instrument. Certainly we have seen a number of banks, including ourselves, and institutional money banking on that CfD. Now it is about setting the target. I think it is the combination of two things. Some countries will have very ambitious targets but not decide the right policy instruments, or not have the right controls around cost and other things. But this country I think has put, through EMR, the right policy instruments in place, so now it is utilising them to achieve targets that were set in place well in advance.

Chris Hulatt: To me, most countries around the world are really focused on how they are going to decarbonise in the lowest cost way and what that means. For most countries that does mean they are going to turn their attention to areas that can scale, so solar, onshore wind, combined with other things that can play a part in an ecosystem, like demand-side

response and storage. All these things have a role to play, and I think this is part of the overall environment that most countries are focused on, is: how can you combine these factors together with CCS and other sorts of mechanisms to get that overall spectrum of measures. No one thing is going to be solution outright. It is going to take many of these to come forward.

Peter was talking earlier about the ability to make things happen more cheaply, and we have seen that in sectors in the UK already, where wind and solar have driven down the cost of deployment partially through equipment, but also through efficiencies being squeezed out throughout the value chain. This, to me, is where the consistent vision is really important. It allows suppliers throughout that value chain to focus on what role they can play in the long-term targets.

Q253 Dr Poulter: Just on that, we have talked about that direction of travel in other countries. Some countries have a broad political consensus and energy is not a political issue at all. I presume that is quite a good environment for investors under the framework, because there is an understanding that energy is not a politically hot topic so change of Government is not going to substantially derail or change what the framework may be for investment. Is that a fair comment?

Alejandro Ciruelos: I think that is a fair comment, yes.

Q254 Dr Poulter: Yes. There are a number of examples of those I can think of. If you were to tell the UK Government what could give us confident investors and, “This is what we would like to see in the longer term”, a few relatively quick words from each of you on that would be quite helpful?

Alejandro Ciruelos: From our side, I think I mentioned it before, targets beyond 2020 using the existing policy instruments would be desirable. Any 10-year policy that needs to be implemented when we are calibrating what is the right mix of technologies cannot be done in an abrupt way. They have to be done in a transparent way, and also expedient in the sense that it cannot take more than a few months for the Government to consult in terms of how the available support for a certain technology or technologies is going to change, as that leads to investment clarity. It is that communication with the targets, utilising the existing policies that we have in place, and to the extent that we need to calibrate what is the right mix across technologies for support for some technologies that is done in a transparent way through a consultation process, and also in an expedient manner. I think those three things, in terms of making policy predictable and consistent, will definitely drive investment into the sector.

Carol Gould: I think it is definitely that stability of what has already happened. All of the RO projects that are in our portfolio, the CfD projects going forward, ensuring that there are no changes retrospectively to those elements, because I think that would be the damage to the investment decisions that we make going forward in the UK power sector. It is basically keeping things on an even keel, and extremely helpful if there is some clarity on pipeline.

Peter Dickson: Yes, I would like to see an extension of the LCF, along with some clarity as to how it is quantified and what the calculations are, to see that extended for a considerable period, say 5 to 10 years beyond 2020, and allowing us some clarity of what

is going to be included. I might add, that maybe not so many attempts at interfering with technologies that are there. There are a lot of minor minutias rules as to what technologies will qualify and not necessarily qualify. I think that can be unhelpful at times as well.

Chris Hulatt: Yes, I share the thoughts of the others in terms of the visibility beyond 2020. To me, I think the Government should not be trying to pick winners and losers. I think they should be trying to create the right level playing field, the right environment, where different technologies can fight fairly for the support mechanisms that are available. I also think it is important that the Government create the right environment for new and emerging technologies to have their chance to show the role that they can play. That is something that other countries are now starting to do successfully. We have seen some emerging steps in areas like storage, and I would encourage the Government to continue to push those forward.

Q255 Dr Poulter: The final question from me is: we have had a list sent by Amber Rudd, which is a copy of the Government top 10 things that the Government are doing to secure investment in clean, secure energy. Which of those would you highlight as being positive, and what would you add to the list?

Chris Hulatt: To me it was what was conspicuous by its absence, so no reference to onshore wind or solar, nothing on demand-side response and nothing on storage. Demand-side response and storage both have a really significant role to play, but will need the right kind of framework to be created to allow those to be possible. There are some changes, for example, to the framework for storage that would make a big difference to that, which I think the Government should look at.

Peter Dickson: Similarly, I feel that what we have backed away from over the last few months is much more significant than some of the measures that have been talked about. In the very short term I would like to see something about the next round of CfD auctions to come very quickly, and I would like to see some positivity around that, for example. I think that would be a much more significant statement than any of these.

Carol Gould: I think timing and budget for the next CfD auctions are the most important things that I would like clarity on at the moment.

Alejandro Ciruelos: I think that the usual statements there for me have been the 10-year advance in offshore wind, the possibility of having three auctions within the current Parliament, and I think the fact that the Government will sign up to the Paris agreement, because in terms of the list, at least setting the scene beyond 2020 does clearly create more of a long-term vision towards where the sector is going.

Q256 Chair: I think it is the final question for this panel, I will ask Matthew Pennycook. It is always dangerous to say “a final question” when you are in the chair here, by the way.

Matthew Pennycook: A final and specific question, Mr Hulatt, on storage. We know there is uncertainty around the legal and regulatory framework, and it feels like if the Government came forward we could see quite a lot of progress in the very short term. Are you worried at all by the timescale the Government seem to have set out in that we are looking at a consultation later this year, and then something presumably early next year. Is that too long to wait? Should we be getting moving faster than that?

Chris Hulatt: There is no doubt this sector is ready for things to start happening in it. I think the EFR tender that the National Grid has put forward is a good start. The four-year programme is helpful, and ideally we would like to see some longer term measures available as well. I think you highlighted one of the key challenges around storage at the moment, which is the legislative way in which it works in both generation and consumption. I think it is known within DECC and Ofgem that the rules need to change around that to make it viable. We would also like to see some other changes to allow storage to be co-located with generation like solar farms, for example, in a way that does not impact on the qualification of that renewable asset for the FIT or the ROC.

There is no doubt that storage is going to make a difference to the world's electricity framework. A colleague of mine was out in California investigating it in more detail a few weeks ago, and it is a sector where there is a widespread level of interest around the world, and something that the UK should be exploring seriously.

Chair: Thank you very much, and can I thank the panel for your time and sharing with us this morning. I will now ask the panel to change over and we will take our second panel. Thank you.

Examination of Witnesses

Witnesses: **Lilia Stoyanova**, Director, Townsend Group, **Morgan Angus**, Principal, Townsend Group, and **Donald MacDonald**, Chairman, Institutional Investors Group on Climate Change, gave evidence.

Q257 Chair: Can I ask the panel to state their names and organisations for the record, please?

Donald MacDonald: Donald MacDonald. I am the Chair of the Institutional Investors Group on Climate Change.

Lilia Stoyanova: Lila Stoyanova, the Townsend Group.

Morgan Angus: Morgan Angus, the Townsend Group.

Q258 Chair: Thank you very much. Donald, you just reminded me, my neighbour is called Neil McNeil, and he was in school with a Donald MacDonald and an Arthur MacArthur as well, so it is not an unusual name at all. The UK, as we know, has fallen from eighth to 11th place, as was said in the previous discussion, in the EY renewable energy country attractiveness index. Broadly speaking, of all the policy announcements, which do you think might have had the biggest impact on investors' confidence and may have led to that slippage, or may not? Of course you are free to disagree with that.

Donald MacDonald: From the summer onwards there have been changes made, and we understand the reasons for that. But I think that the way that they have been done in a very piecemeal manner has spooked slightly investor confidence. I think that is probably the biggest reason. I do not know the methodology that Ernst and Young used, but my guess

would be that it has been a lack of clarity and what appears to be a piecemeal approach to the changes that may have caused some doubt.

Q259 Chair: I gave a gloomy opening there, but would it perhaps be fairer to say that the UK's attractiveness has improved since the Secretary of State's reset speech?

Donald MacDonald: There are many positive elements in the Secretary of State's speech, and we welcome many of them, and in fact they are very bold. However, coupled with some of the other changes, the move away from onshore wind and so on, I think there are genuine doubts as to whether or not the UK Government can meet its own targets over the longer term, and could cause problems in terms of energy shortfall and energy security. While there are many strong signals in the Secretary of State's statement, there are also some rather big issues, and I think there is a lack of clarity as to how we are going to be able to think about how we allocate investment.

Q260 Chair: Is it fair to say to say there is a lack of a plan, sometimes I say a lack of a man with a plan, just because it rhymes, in DECC—but it would be more correct to say lack of a woman with a plan in DECC—for the UK energy policy in the future as it goes forward, as the phrase is, at the moment?

Donald MacDonald: Sorry, my hearing is not so good.

Chair: I am wondering if there is a lack of an overall plan, a lack of a person with a plan in DECC. Is that a feeling that you get?

Donald MacDonald: Yes, it does not seem to hang together well, it has been done in a piecemeal manner, and I think the sooner we get together with improvements in terms of trying to give the market some indication as to what the long-term ambitions are, then that will remain. Having said that, I still think the UK remains positive in terms of an attractive market to invest in. The UK probably was best in class when it came to consultation with the market, and with investors, and with the energy industry. What has happened now is we do not seem to have that same sharing of information. That can be improved, and I think improvements in that would be very welcome.

Morgan Angus: I would not say necessarily the lack of a plan, but the lack of how that plan is announced to the market, how transparent that plan is, and how transparent the assumptions and the workings behind that plan are, they are the important things from our point of view.

Q261 Chair: Okay. Does the lady have any views on the reset speech and how people felt about that afterwards?

Lilia Stoyanova: Yes. I would like to say that overall investors want a stable, transparent, long-term framework to invest in. What happened last year was that that expectation was disrupted as the announcements of changes to policy started coming in, and that caused a lot of uncertainty and a general feeling of uneasiness as to what the current policy is and what is happening. In addition to that there was the postponing of the CfD auction and a big amount of uncertainty as to the ongoing policy, so not only early closures of the existing policy, but also uncertainty into what is going to come into the future. Those two things combined raised the uncertainty and then caused a lot of doubt about confidence.

Q262 Chair: Thank you. Are there any examples that you know about of institutional investors leaving, or putting on hold, or reducing their investment in the UK, or in any way changing their approach to the UK as a result of recent policy changes? Morgan, I can see you are nodding, so I will go to you first.

Morgan Angus: No, absolutely. We invest on behalf of pension funds typically, and we typically have global mandates to invest in infrastructure broadly, so we do not have a specific bucket for UK renewable energy. It is competing against other technologies in the UK, other types of infrastructure in the UK, and other renewable energy in different countries as well. But definitely the way that we approach the UK specifically now has changed in that the bulk of our investing is done via closed-ended fund structures. You had Glenmont on the previous panel; we are invested in their fund, for example. We would not today invest in a 10-year, or 15-year, or 20-year closed-ended fund structure that had a five-year investment period that was just targeting UK renewables, much as we might like to, because there is uncertainty around what they would be investing in and what the terms of those investments might be.

We have return targets that we need to hit for our clients as well. That does not mean that we are not investing in the UK. We are, and we have made recent investments into UK onshore wind, for example, but it has been done via co-investments or club structures that have much shorter investment periods, and very specific targets, and much more control for us as investors around where that money will be going and when it will be going in, so that we can have a bit more certainty around what our return profile is likely to be for our clients.

Lilia Stoyanova: Yes. That really targets the window of opportunity created by the expiring of the ROC regime. There are a number of projects that are yet to be built. Our investment currently targets the very short term before this regime closes.

Donald MacDonald: It is fair to say that investors are certainly reviewing their investment plans. I heard what was said on the previous panel about hearsay and so on, but we do know of plans that have investment opportunities that have been scrapped after review. Not many, but we do know of them. Anecdotal, yes, because it is commercially sensitive, but I know of two pension funds, for example, who have done that.

Q263 Chair: We all have anecdotes, and as chair of the Committee, months ago—they will remain nameless at the moment—some Americans came to me and said that they were pulling out of a \$100 million or \$200 million investment in the UK. Is there any figure that we could probably aggregate to give an idea of investment that has been lost, but also investment to be given by the Government? Because some investment might have come in that has not come in, and I think that is the figure we are really about. There is a feeling, and please correct me if I am wrong, that investment has been lost and investment would have happened had these policy announcements not occurred since July. What I am trying to drive at, and I do not know if the answer can ever be found given it is a collection of anecdotes, is roughly how much has been lost?

Donald MacDonald: The assumption you are making is correct, I think there probably has been, but we have not done the work. We have done no work to try to aggregate the total. I think it would be very difficult to do that simply because of the commercial sensitivity. It

does not matter whether they are asset owners or fund managers, investors in general will not want to discuss their investment process in public. I do not have a figure for that.

Q264 Chair: Do you think it will be something that is found out in the future as we do retrospective year-on-year comparisons, and then we see what the potential drop off was post—

Donald MacDonald: Yes. Bloomberg and other agencies do provide year-on-year comparisons, but of course that is historic information. We will not know that until it is available. On the other hand, there was a drop from, I think, 2012 and that has picked up again. I think that was caused by uncertainty in parts of the European market with retrospective changes to tariffs and so on in Spain and in three or four other countries. There was a drop off in Europe and internationally for a number of reasons last year. The global figures have picked up enormously, but I really would not want to speculate on the total figures for the UK.

Q265 James Heappey: We do this inquiry, I think it is a useful inquiry to do, but there is a danger of trying to do it in lab conditions and ignoring that there are plenty of other factors beyond UK Government energy policy that will impact on investor confidence. You just mentioned that. I do not know how we reconcile that in the way that we report, because an impact on the loss of investment will be the Chinese economy. An impact on loss of investment will be general confidence internationally in energy markets full stop. There will be a nervousness starting to emerge over where we will go with our membership of the European Union. All these things run concurrently and will be impacting as well as the explicit policy changes made by DECC.

Donald MacDonald: That is a fair point. But on the other hand, the UK was a market leader and was seen to be a market leader in the area. I am not sure that we are in that position at the moment. I think we can recover that position very easily, but it needs greater consultation with the whole of the investment chain and all of the stakeholders within that, and I think maybe greater clarity over the levy and so on, maybe extending that through to 2025 would give greater clarity. I think what investors are really looking for is simply a glide path. Nobody expects huge subsidies or anything like that on an ongoing basis. But I think what would be helpful would be for DECC to try to provide wherever possible a glide path for what is available, for how much Government support is going to be there, and that gives an improved level of certainty as far as investment decisions are concerned.

In the UK the return on renewable investments has been possibly lower, I think, than other countries partly because there has been confidence in the market and confidence in the political consensus supporting that market. There is a little bit of unease at the edges on that, and I think trying to get political consensus, which is really down to you rather than us, would be enormously helpful in trying to build up confidence in the investment process.

Q266 Chair: Okay. The final question from me at the moment is how can the UK become more attractive for institutional investors? Could you help us understand the level of detail and in what areas you would particularly like the focus to be on?

Morgan Angus: Yes. Just to echo some of Donald's thoughts, it is around the transparency, and understanding what is going behind the assumptions that are being made to come up with the Levy Control Framework numbers, and so on, so that when something happens in the market people can understand how that is likely to feed through and start pricing that in way, way, way before any sort of Government announcement is made. It helps people to understand. If people can understand what the ramifications of certain things are then it provides much more stability and clarity.

If people are concerned that there are likely to be shocks, even if there are not shocks that has an impact. On the previous panel they were discussing the issues in Spain. They are still way down the list because of things that happened almost 10 years ago. I do not think Spain is likely to do anything like that again, but people are concerned that it might, and that is the issue.

Q267 Glyn Davies: This whole collection of questions we have had, there is an interesting aspect of this that I would like you to comment on. We live in a democracy, so we have changes of Government. I would imagine that the investment world, before any election, is looking at the scenarios of different Governments and what they might do. Before the last election it was pretty clear that there was an antipathy to onshore wind in one of the parties. Clearly there were concerns about the Levy Control Framework and whether it might breach the ceiling. I was involved in these discussions myself. When the party that had been saying this becomes the Government, wouldn't some of these changes have been anticipated in the scenarios that the investment world might have had before the election?

Morgan Angus: At a high level, yes. For us it is difficult because we are one step removed. We are typically investing alongside underlying fund managers or sponsors or developers who will be on that frontline and be thinking about that stuff much more closely. We have a global real-asset mandates so we need to think about the sort of high-level, general policies that are like to happen around the world in all different asset classes. So, yes, there was nervousness around UK onshore wind and that was understood. What was not understood was how quickly that was likely to change and the mechanisms around that were not understood because of the history of that sort of thing not happening.

Lilia Stoyanova: Yes, and I think the other thing is although there are some political underpinnings we would have expected to see a clear economic question or clear justifications and evidence for not supporting cheapest form of energy in the UK, which is onshore wind, and then how that fits within the broader framework of how the UK plans to achieve its 2020 goals; how do we think about decarbonisation generally. So not just one statement here saying, "We are not supporting that form of energy" but that clear justification and evidence and analysis done on how it fits within the overall framework. So it comes back to the communication of it or the process behind not supporting onshore wind for example.

Donald MacDonald: To echo the comments, at a higher level I don't think this has been a terrible shock. I think there have been one or two surprises; solar and so on. I take your point, we do, fortunately, live in a democracy and it is important that there is clarity of policy but I think the timing, probably the lack of consultation with the stakeholders—I don't think that helped matters—all of these things do come together and create an atmosphere of trepidation. It won't stop investments but it may slow down decision making and we know it has probably pulled some investment previously.

Lilia Stoyanova: Another thing to add: I think in the press what we have seen is that the justification for a lot of these policies was affordability—so the overspend of the Levy Control Framework—and minimising consumer bills. We did not see any clarity around how that happens, what the impact on consumer bills would be, whether all the factors that play in to that have been taken into consideration and how the changes that were made would alleviate that. Just one example: it is quite clear of course that if the prices for electricity go down the subsidies or the payment to generators have to increase. However, a consumer bill is composed of more than the payment to support clean energy. I think 35% to 40% of that is just linked to wholesale prices so as wholesale prices go down, consumer bills go down as well. If you are looking at the overall impact, has that been factored into that analysis? That is something that for example we are thinking through and it was not quite clear from our perspective whether all these elements had been taken into account.

Morgan Angus: It may be that they have but it has not been communicated effectively.

Chair: Thank you. We will cover that, and indeed the LCF as well, later.

Q268 James Heappey: What do you see as the role for the institutional investors in the UK energy structure?

Morgan Angus: I think institutional investors should be the primary source of equity capital for the UK energy infrastructure market. Certainly it makes a lot of sense when you look at the cash flow profile of a lot of infrastructure projects and sectors and match that to pension funds' liabilities. It is a good fit. Certainly a number of the larger pension funds at least, we have seen good evidence of them becoming heavily involved in the sector, including our clients and I do think that should be the case. Pension funds and insurance companies should be the backbone of the equity investment into the sector.

James Heappey: Nods of agreement from the rest of the panel. We will move on.

Donald MacDonald: Can I just make the point, though, that the institutional investors, most of our members for example, will invest right across the whole range of energy from oil, gas and coal right through to the renewables areas. We all have a fiduciary responsibility to our members. So what we are seeing is a move away from coal, for example, and a move towards cleaner technologies, including intermediate technologies like gas and so on, as a move towards a lower carbon society, plus big investments in renewables and we do that through equity holdings in listed companies; we do it through private equity holdings; we do it through joint ownership in some cases of windfarms. We also do it through the credit market so we will provide the finance for corporate bonds for example. So right the way through the entire energy market we have a pretty critical role, I think, at every stage of that and some of us will provide the finance for project build and things like that. Institutionals tend to go for more mature infrastructure rather than the high-risk front-end element; project capital and things like that.

Q269 James Heappey: I was going to ask you about that right now. The project pipeline: my understanding is that institutional investors will tend to be towards right-hand end, the construction, operation end of it. Were you just suggesting that indirectly there is money that originates from you that makes it into the left-hand end of the pipeline as well?

Donald MacDonald: Yes, Pension funds and insurance companies are now becoming more used to the area and they are now starting, in a small way, to take some of the build risk on, for example. I don't want to go into particular details because again it is commercially sensitive for the players involved but there is a capacity to do that. By and large the high risk stuff is taken on at the front end by project capital and high-risk private equity and they have investors who are prepared to take that level of risk. It is not a problem because although it is a relatively short-term investment what they do is they will run the project, do the construction, sell to institutionals and then take that money and move on to do other projects. So it is a very efficient use of capital. The institutional investors will then hold the windfarm or whatever project it is for a pretty long period and so there is an issue of illiquidity for pension funds because if we are going to buy into a long-term project clearly we need to have long-term confidence that that is going to provide a return for pensions, in our case, as a pension fund trustee. So it is really getting the mix right and understanding what role each player has in the investment chain. That is a very important point.

James Heappey: Thank you. Lilia, you look like you were about to speak as Donald spoke. Did you have anything to add to that?

Lilia Stoyanova: No. A very similar view.

Morgan Angus: I was going to say that every pension fund is different. There are very few pension funds that have a specific bucket or target allocation for UK energy within their mix of investments. They will typically have 40% equities, 40% fixed income, 20% alternatives, let's say, and within alternatives maybe 10% private equity and hedge funds and 10% real assets. Then within their real assets maybe it might break down as far as 5% to infrastructure but it is unlikely to break down much further than that and that infrastructure could be UK energy or German energy; it could be US roads; it could be anything in the infrastructure space.

Q270 James Heappey: Well that is interesting, Angus—Morgan, sorry.

Morgan Angus: That's all right. Everybody gets it wrong. Don't worry.

James Heappey: Forgive me. Your appetite for investment as institutional investors in the energy market, is it the same as it would be in other infrastructure markets? You mentioned US roads there.

Morgan Angus: Yes.

James Heappey: What it would be useful to understand is we are going to try to make an analysis of the impact of UK Government energy policy on investor confidence in the energy industry. Are we able to make a comparison between people's willingness to invest in energy and their willingness to invest in other things because you applied the same primacies to both, or is there something very different about the way you invest in different types of infrastructure?

Morgan Angus: The same macro parameters are applied to both. We look at everything on its own merits. But also each of our clients has a specific target they want to hit in terms of return and they also have a specific requirement in terms of the level of risk they are

willing to take on. I guess what you want to get to is a point where the UK energy environment is so stable that there is a separate carve out for UK energy within a pension fund, let's say, and they say they want to put 2% of the pension fund into UK energy projects and they will do it just for the operational phase, let's say, and they know they are only going to get a 4% or 5% return but that is okay for that little part of the bucket. The issue is that when you are looking at as we are in the grand scheme of things and looking at the mix of all the different types of things we can invest in then it needs to stack up against those things.

Donald MacDonald: I entirely agree, but I think there is one significant difference about investment in the energy area and that is the issue of carbon and the move towards a low-carbon economy. Investors, particularly those involved in the IIGCC, including the Environment Agency pension plan, I think are becoming increasingly aware of the risks associated with carbon fuels, particularly obviously coal but also oil and the volatility of that market. The whole concept of stranded assets has become largely accepted I think now within the markets. So the institutional investors are looking towards low-carbon investments as a means of hedging against the risks of their carbon investments. So while there is a gradual process of moving away from carbon-based investments toward renewables the renewables are seen as a hedge against potential losses elsewhere. That to me is the only difference between the energy market and some of the others.

Q271 James Heappey: The premise of some of the briefing we have had for today's session is that it is relatively binary. If you are not investing in UK energy infrastructure you will be investing in the energy infrastructure elsewhere. But that is a false premise because it may be that you are investing in UK railway instead of UK energy. Can you give me a sense of if the pipeline for energy projects does start to dry up in a way that it becomes unattractive to you as institutional investors, what are the other areas in which you would invest? What are similar investments in other sectors?

Morgan Angus: Again, it is very client specific. I mentioned the Environment Agency pension fund, which is one of our clients. For them a lot of what we do is UK renewable energy investing and if it is not UK renewable energy the bulk of it is likely to be in other countries' renewable energy. The alternatives for them are anything else that is not high carbon. So they won't invest in roads; they won't invest in airports; things like that, which make up quite a large part of the overall infrastructure market. So that particular client's market is more constrained but then they can invest in telecommunications, low-carbon transport, rail for example, other things like that, and social infrastructure, schools and hospitals.

Q272 James Heappey: What sort of volume of investment per annum—wet finger in the air—has that sort of responsible tie to it? What proportion of investment is just, “We want a rate of return; we don't care what it is in”; what proportion is, “It needs to be in particular area because we need to feel good about where we spend our money”?

Morgan Angus: Investors are generally becoming more conscious and a lot of pension fund investors especially have a certain ESG overlay on their investment programmes more generally. In the real asset space it is, I guess, easier to see concrete evidence of that and really influence—

Q273 James Heappey: So globally we are talking about huge amounts of money, trillions of dollars, that are in funds that are intended to go towards specifically green energy or just sort of “do no evil” to quote people?

Donald MacDonald: I would not put it in trillions but certainly hundreds of billions every year go straight into renewables. I think it is about \$270 to \$300 billion last year.

Q274 James Heappey: That money therefore by default is going to go somewhere—

Donald MacDonald: Oh, yes.

James Heappey: —and if it is not being invested in the UK; it is invested in renewables elsewhere.

Donald MacDonald: Absolutely. But even in Europe there is a lot of interest for example in the EU club plan and specifically in the proposals by Commissioner Sefcovic for greater interconnection of electricity and gas in continental Europe because of energy security and also because that will improve the efficiency of the renewables sector through greater interconnection. That it is going to need some heavyweight finance. There is a lot of interest within the pension funds to see how this is going to be rolled out because we know that the Commission will use public money but try to heavily leverage and get large-scale private investment. There is a lot of interest and there will not be a lack of investable opportunities but it would be a great loss to the UK if we gave up some of our potential investment in the UK. That would be a shame.

Q275 James Heappey: This will be a matter of political perspective, frankly. I am starting to conclude that Government policy has redirected your focus—you may or may not want that to have happened—but there are still lots of opportunities within the UK to invest in the decarbonisation agenda, be it in interconnection, be it in electrification of the railways, be it in offshore wind, be it in new nuclear.

Lilia, you are interjecting helpfully.

Lilia Stoyanova: No, I would not concur with that because what is the detail available today? What you are talking about here does not exist really. So let’s take it one by one. First, nuclear I think is out of reach for most institutional investors. That is not something that they will invest in. It is much higher risk. If you look at offshore wind, we have heard from the Government that this is an area they would like to support; however the parameters of that support are not clear. There is no clarity on timing, on quantity of support, on how many projects can get off the ground. So there really is not a clear view there either. In terms of interconnections, there are a few projects ongoing but this is by far not something that is out there and available for investment. There are a few big projects, but same thing. There are a few groups investing in them. So if you look at the smaller to mid-size market where more institutional are likely to play there is not that much to invest in.

Donald MacDonald: If I could just make the point though that there are other indirect investments in things like energy efficiency that we will undertake through property portfolios for example. In London my own pension fund is a major player in the King’s Cross redevelopment in which energy and water efficiency have been integral from the very first day, long before planning permission was granted. So there is a lot of positive

investment being made by institutions in a way that is not necessarily to do with energy generation but it is to do with the better use of the energy that has been generated. There is a lot of stuff going on and the level of investment is quite high and that will continue but our focus here really is on the generation issues.

Morgan Angus: We are also investing in energy efficiency as well but again it is quite difficult to find people—and it all comes down to partners and managers that you would trust to execute a strategy over a multiple-year timeframe—to do that. So we have invested in energy efficiency but the rate of deployment has been fairly slow and it has been difficult. The projects tend to be very small so to aggregate that to a fund-level investment takes a lot of time and has probably been much harder than those people have expected. That is the main issue; finding those partners. The problem is that when there is a lack of confidence in the system and you start to lose that early-stage development then that is when those quality partners just say, “If we can’t do it in the UK we will do it somewhere else” and then later down the line when the fund managers are looking to partner with someone they do not have those quality partners. The risks within a project are not just the macro-level risks, obviously. There is a level of detail that you need to go into and multiple risks, even from site to site, that need to be taken into account. If those quality partners are not there and maybe some of those other risks become higher and it becomes less investable generally from an institutional point of view.

Chair: I like the sound of positive investment. I need to find some institutional investors to invest in an interconnection to the Outer Hebrides or indeed maybe interisland tunnels, if you know anybody who is interested in infrastructure.

Donald MacDonald: I agree, because there is still that big diesel standby generator.

Chair: Indeed.

Q276 Dr Poulter: There is an implicit conflict, or is it a trade-off, between keeping energy prices low in the short term and investing for the future or investing to save, if you like, in the energy market. There is an impact on the costs to consumers. Can you explain about how costs to consumers could be affected if we don’t invest in the energy market and just generally in the energy sector now?

Donald MacDonald: Looking at it from a higher level, if the UK does not meet its 2025 to 30 targets—there has been a lot of speculation just this week in *The Financial Times* and elsewhere about consultants who believe there is going to be a major energy shortfall—I think under those conditions, with the provision of diesel generators and so on and with an overall shortfall in production, the wholesale prices of electricity will rise significantly and that will have, I submit, a detrimental knock-on effect. Therefore what we would argue is that it is better to continue now with a higher level of investment in renewables, which will help to meet our own renewables targets, help to meet the targets we have agreed to with the EU and now with the COP 21 Paris agreement and so on, but we also need to keep investing in order to provide our own energy security. It is not just a question of the windfarms. We haven’t had a strong signal for example as to how we are going to deal with the shortfall through improved gas generation. There is a whole range of issues that we could be looking at. Both Government and investors should be looking at a menu of opportunities to ensure that we are able to maintain our energy security in the UK. That is a very important issue.

Q277 Dr Poulter: You have picked out the key issue of energy security. I also want to talk about what the effect on consumer prices would be if we do not invest or see investment in the energy sector.

Donald MacDonald: The longer we put off investment in long-term generation then the costs for short-term solutions will be much higher. That is the reality for energy, as it is for most other industries.

Morgan Angus: It is not exactly clear what that feed-through effect is. Obviously at the moment fossil fuel prices are incredibly low so that is presumably lowering the wholesale price. The renewable part of the consumer's bill is only 20%-odd, let's say, but also the renewables themselves will lower wholesale prices over time. If wholesale prices are coming down anyway because of fossil fuels, should we be reinvesting that difference in things that will lower the price longer term? I think that makes total sense.

Q278 Dr Poulter: Donald, you told us that Government intervention lowers the cost of capital. Can you take us through that in more detail?

Donald MacDonald: Without having clear plans, without having a clear pipeline, without having the mechanisms of the levy understood on a longer-term basis, then the cost of capital will increase because of the uncertainty. If the perceived risks become higher then the cost of capital will increase and that ultimately will be fed through to the wholesale prices.

Lilia Stoyanova: An example of that, if you look at Germany for example, which is probably the country in Europe with the lowest cost of capital, institutional investors are willing to invest at mid-single-digit figures. The reason for that is obviously the clarity of the framework, the long-term nature of it—there have been no back and forths; no changes—in fact changes were built in to the system to adjust gradually over time so that when the cost of technology went down the level of support would go down as well, and of course the nature of the system as well, where institutional investors lacked exposure to power prices. All that taken together led to the fact that in Germany is by far the lowest cost of capital.

Q279 Dr Poulter: Government policy, Government intervention, the actions of Government, can affect the risk premium. Can you talk us through that with perhaps some examples like the very good one you just gave from Germany of how that could play out?

Donald MacDonald: By and large anticipated returns in the UK are not spectacular but historically they have been regarded as being pretty secure and there has been a good forward understanding of where the industry and Government policy is likely to take us. If we lose that confidence in general political policy cohesion and stability then the risk issue, the appetite for risk, will change and the cost of the risk will change. It could well mean that the appetite of some investors who are already in the area may diminish because they are looking, as Mr Heapey said, at the right-hand end of the scale. So they may want to move further down that line, which would not be in anybody's interest quite frankly. It will shove up the prices.

Morgan Angus: It is very difficult to quantify.

Q280 Chair: It is interesting, the point you were making there, Donald MacDonald, on Government intervention lowering the cost of capital. It just shows what many economists will say the Government is a big player in the market; a huge player in the economy. But someone else in Government says to us it is about the cost of bills and they are quite focused about keeping the costs down for bill payers. A criticism I have for that stems from studying engineering many years ago, you can argue that water is liquid until you bellyflop; you can argue that glass is a solid until it is in the fine old English cathedrals and it has actually flowed over a thousand years; it is liquid, not solid. The point you were making about costs then and investment, the focus on keeping costs down, what Government does not say is there is a time link to that. You can keep costs down today but that is at the expense of costs tomorrow. I am putting that hypothesis out there. Would you agree or disagree with that? Feel free to shoot me down.

Donald MacDonald: Consumer costs are going to be critical. It goes back to the point I think we made earlier on; the longer we delay investing in the longer term the costs of dealing with short-term problems will increase.

Q281 Chair: I think I agree with you and I definitely think that the communication from Government about this is that they see investment today as a cost.

Donald MacDonald: Yes.

Chair: I disagree with them. I don't think it should be seen as a cost today. It is an investment for tomorrow. But if you want to drive your investment on money you are putting in today, it is quite tempting to reduce that, to reduce today's costs, but today's costs are part of tomorrow's investment, which will then reduce tomorrow's—

Donald MacDonald: Absolutely. You are investing for the long term. These are long-term projects. There is absolutely no doubt about it. What is seen as a cost should actually be seen as an investment opportunity. There will be a return for the nation, in our opinion, because public support, private capital getting involved with the support of Government, will give long-term benefit and better price stability for the wholesale, and ultimately the retail, market.

Q282 Chair: Before I move to the Levy Control Framework, which I want to touch on, strategically there is an argument I have seen about the Government and its undermining of support for renewables over the last few months. It touches on the point you made earlier; just a brief remark about wider energy security that you said was in *The Financial Times*. Having attacked, if you like, onshore wind; having attacked solar, and now with the uncertainty there is now around Hinkley C, it may be that the Government, some would argue, have lost twice over. They are either not going to get Hinkley or they are going to get a more expensive Hinkley. One of the reasons might be playing into that energy security you were saying, but they have played a card already that has shown a lack of support for renewables and if you are a Hinkley investor you know they have already closed an avenue down and you could potentially cynically say, "We can drive more money out of the UK Government for this". Is that an argument you would disagree with, or agree with?

Donald MacDonald: Let's put it this way, since the announcement was made, and it is 35 years of RPI—CPI or RPI; I think it was RPI—linked, the cost of Hinkley now would be running at £96 per megawatt hour. Is that correct? Thereabouts.

Chair: £92.50, I think.

Donald MacDonald: If you put in the RPI multiplier effect it would take that I think to around £96. From memory the last auctions—there were three, was it three, big auctions, last year—for onshore wind were running between something like £79 and £82. I wouldn't want to speculate on the reasons behind all of that—that would not really be my role in this—but I think quite clearly there has been a strategic shift away from what is becoming a very cheap and long-term provider of energy to this country. There are issues, which we all know about, of intermittency and so on and there are ways of overcoming that through greater interconnection, as the Grid already manages, through gas, where you can turn up and turn down the generating capacity, and that can operate efficiently. I think it would be wrong for me to speculate about the Hinkley thing, the pricing mechanism and why we got there. From a purely personal point of view we do not have any position on this. We are not pro-nuclear and we are not anti-nuclear. It is up to each individual investor. We are certainly not anti-nuclear. As a body we do not take a position on wind as against solar as against nuclear. They are all low-carbon technologies as far as we are concerned. But, as we know from the press reports, there are still significant issues as to whether it is ever going to go into operation. The longer we delay using our investment opportunities for the renewables sector, then the more likely we are to have energy shortfall and quite significant changes in the pricing structure.

Q283 Chair: Thank you. I am going to move us onto the Levy Control Framework now. To what extent do you feel policy mechanisms, such as the Levy Control Framework, influence institutional investors in your investment decisions?

Donald MacDonald: Hugely.

Chair: Hugely. Thank you. That is brief and to the point.

Morgan Angus: It clearly does have a big impact. As we said earlier, it is around the lack of transparency about how those figures are arrived at, what feeds into them, what the assumptions are that go into making those up and how they change over time. The latest numbers are a couple of years out of date. Fossil fuel prices have come down massively in that period of time and so if you reset it now, what would it be? It is difficult to understand exactly how that mechanism works.

Q284 Chair: You obviously want a high level of detail in the LCF and we have heard some criticisms that there is no clearly defined plan for how changes to policy were made and there is an overspend in the LCF. Is that something that concerns you?

Morgan Angus: Absolutely, and for the same reasons as the previous panel said. We are looking at investments over 20 years and we are looking at making commitments to those investments that will last multiple years as well. Obviously there are retrospective changes and also future changes. Notwithstanding the LEC thing, which obviously some people think is retrospective and some people do not, I think we are relatively comfortable that the UK Government is not going to make massive retrospective changes to policy so we can be fairly confident and that is the reason why we are still pursuing the investments in UK onshore wind that are closing now because we are confident that those will be fine for the 20-year PPA that will be in place, but by the same degree we need to make investment decisions, to go into funds for example, that are going to invest over five years and if we

are not clear exactly where they are going to be investing it is much harder for us to make that decision.

Q285 Chair: Do you think there is a structural problem, or an underlying foundational problem, with the LCF in that the LCF is being paid for by bill payers and that leaves it open to political attack—back to the previous point about investment; from evidence we had from E.ON that attacked its structure and said it should be funded from general taxation, which would be a lot less regressive, would be progressive, rather than the way the LCF currently is structured—because it enables the politician to turn round and say, “This is about costs”—of course we know what they mean about costs, it is immediate costs not future costs—and that therefore has an impact on what should be happening strategically when somebody can use something short and tactical like that against it.

Morgan Angus: We probably do not think about it at that level, to be honest, but yes I agree, generally speaking, that it probably would have less of an impact if it was funded like that.

Lilia Stoyanova: I think it would help if it was clear what the LCF stands for. What is it trying to achieve? How does it fit within the overall framework of reaching the 2020 goals? We are talking about overspending but it is not quite clear on what basis. When originally the £7.6 billion in 2020 was set it was a few years ago when the power prices were at a different level. So if you are looking at overspending from the perspective of the consumer and the consumer bills, you have to compare like with like. It is not quite clear how that is used and what it stands for.

Q286 Chair: When you have a panel and the voice of that panel is that they unclear about the LCF what chance do the general public and everybody else have with understanding the Levy Control Framework. Donald MacDonald?

Donald MacDonald: I would not claim to understand the mechanisms because it is not transparent. However, the good point about it is it does give an approximate indication as to the pipeline for the future. So from IIGCC’s point of view probably the best reform we could make to the LCF would be to try to extend the period through to 2025. To me, or to our members, that is probably the most important change we could make because it is actually helpful.

Q287 Chair: A hobby horse of mine is the effect of the LCF on wholesale prices. We know of course that fossil fuels have affected wholesale prices but we know that the LCF has enabled renewables to come on, to be there, which has had an impact on wholesale prices. Do you have any feeling as to a positive role the LCF has played? In some ways it can be argued that the LCF is cutting its own throat because as it has passed the LCF’s lowest wholesale prices today perhaps that puts greater demand on the LCF, combined with the fossil fuel drop, on further top up to agreed prices.

Lilia Stoyanova: Do you mean what the overall impact would be? Or just in view of what—

Q288 Chair: If there had been no work in the past from the LCF, where would wholesale prices be today; if that had not enabled the building of renewables?

Lilia Stoyanova: It depends. I have not seen any work, any analysis, done on that. It is difficult but if you just look at purely what the consumer bill is comprised of, that is roughly 35% to 40% linked to wholesale prices and about, I think, 15% to 20% linked to supporting, or paying for, renewable energy, supporting green generation.

Q289 Chair: When you say that would you say that renewable energy has sent wholesale prices up or down?

Lilia Stoyanova: Renewable energy should be decreasing prices because it is an upfront investment with a zero marginal cost of production. So if you have a generator with a zero marginal cost of production that should have a negative impact on prices. I don't know what the exact magnitude is.

Q290 Chair: I think that is the problem, we don't know the exact magnitude but we can see that renewables have had an effect on bringing down wholesale prices.

A final point I want to raise in this area. We talked about subsidies. We have had a complaint that the UK Government was on a glide path, in the last six months it went on a different glide path, maybe went on a free fall some might argue; some might not. Could you give us an example that you know of from other countries of a particularly well-managed glide path out of subsidies?

Donald MacDonald: Every country is very different and takes a different approach. Countries that are able to plan for capacity or for budgeting I think are in a stronger position. For example the expansion corridor that operates in Germany seems to work well. I don't want to get drawn into all the policy decisions that have been taken in Germany but the expansion corridor for various types of technology seems to have operated well. That could be worth looking at. The important point really is to try to have planned budgets and planned capacity, and countries that do that I think are in a stronger position than those who do not.

Q291 Chair: So you think Germany is a good example. Anybody else you would say?

Lilia Stoyanova: I would probably add South Africa to that. It is quite interesting. If you look at South Africa five years it was at the bottom of the RECAI index. Today it is just below the UK, or just above the UK in fact.

Morgan Angus: It is just below. I think it is ninth, isn't it? UK is 11th.

Lilia Stoyanova: Could be.

Q292 Chair: It has improved a lot in the last five years?

Lilia Stoyanova: The point there is I think it was four or five years ago they implemented this renewable energy programme with competitive auctions. Since then they have had very clear auctions every year. If you look at what happened with the price of generation—it was built into these auctions—for wind I think it was a decrease of 40% and for solar it was a decrease of more than 60% over these four years. So anecdotally from people who are involved in that sector, while in the first auction cost of equity was in the mid-to-high teens, last year's auction it was high single digit. So there was a massive drop in the cost of capital because of the certainty and transparency of the framework. Of

course it also had to do with the structure of how it was done but it is definitely something worth looking into.

Chair: Thank you very much. Time is running out so I will take in James Heappey for the final area.

Q293 James Heappey: It really comes down to one question. We were talking about the long-term vision. While much of it has been covered already, do you have any final thoughts on what the Government should do to provide long-term clarity and specifically what it should do to encourage institutional investors?

Morgan Angus: It has all been said. Stable, transparent, long-term strategy that makes it clear to investors how those changes to policy will be made is the key for me.

Lilia Stoyanova: So clarity: how much generation is likely to be supported and what type of generation, if that is different? In the context of the Levy Control Framework, what would that cover? Would that include renewables? So clarity on what the support would be for and how that would be done; and the timing of that as well.

Donald MacDonald: Two practical suggestions. On the LCF, again putting the point made earlier, have that extended through to 2025. Also I think it would be greatly appreciated if the Government could provide more clarity as to how they intend to proceed with the Contracts for Difference over the coming period. That would be extremely helpful for long-term investors.

Chair: Thank you very much. Thank you, Committee, and thank you, panel especially, for your time this morning. Greatly appreciated.